Registering individual portables

Registering the C3060

The following section describes the procedures involved in registering Companion C3060 portable telephones. To register each portable with the Norstar system, you must do two things:

- Register the portables by entering the Registration password on each one.

- Verify that the portable functions correctly.

C3060 Icons

The following table identifies the C3060 portable telephone icons:

C3060	Icon function
	Mute button
☎	Hang up button
☏	Answer button
(Menu)	Feature button
▣	Telephone directory button
▣	Service directory button

To register the C3060

1. Turn on registration for your system.

2. Press (Menu) (✳)(✳)(✳). The display shows **ADMINISTRATION** and three softkeys, **SYS**, **PINFO**, **DATA.**

3. Press **SYS**. The display shows **WIRELESS SYSTEMS**.

Note: Wireless Systems is a registration list of names for up to six different systems. If the list is full, and you must add another system, de-register an existing system name.

4. Press **ADD** to establish a radio link. The display briefly shows **Adding SYSTEM: <next system number >**. If **ADD**, not available, start over at step 1 again.

   The display shows **Pswd:** for an established radio link.

   The display shows **No connection** for a radio link not established.

Note: If more than 30 minutes have elapsed since the last registration, enable the system for registration. See *Meridian Companion Administration Terminal Operations Guide*.

5. Enter the registration password. The default password is $\widehat{7_{PQRS}}$ $\widehat{2_{ABC}}$ $\widehat{3_{DEF}}$ $\widehat{4_{GHI}}$ $\widehat{6_{MNO}}$ (RADIO). The display shows **WTN:**.

   The display shows **Invld Pswd** for a wrong password.

6. Enter the four-digit Wireless Terminal Number (WTN). The display shows **Enter name**.

   The display shows **Invld WTN** when the WTN is wrong.

   The display shows **Reg failed** when the registration fails.

   If you try to register the C3060 to the same system twice, the display shows the registered name. For example **Registered as NORTEL 1**.

7. Enter up to 16 characters for the system name. For example, NORTEL 1**.**

- Press the dial pad key until the letter you need appears on the display. For example, press key 5 three times to display the letter L.

- Press **SPACE** to add a blank space to the name.

- Press **BKSP** to delete the previous character.

- Press ⊙ if the next letter is on the same button.

8. Press **SAVE** . The display shows the registered name. For example, **NORTEL 1 registered** .

9. Turn off registration for your system.

To confirm that the C3060 is registered

1. Select the system you just registered.

    a. Press ☏ to power off the portable, and press ☏ again to power on the portable.

    If the display shows the system name that you just registered, proceed to step 2.

    If the display shows a different system name or **No system selected**, continue with the next step, sub-step b.

    b. Press ⓜ⊛ ⊛ ⊛ .

    c. Press **SYS.**

    d. Press ⌃ or ⌄ until the display shows the system name you just registered.

    e. Press **SELCT**. Then press **OK** or **END** to exit Administration.

2. Make a call.

    a. Press ☎. You hear dial tone, and the display shows **LINK**. If you do not hear dial tone, check that you have selected the correct system or register the portable again.

    b. Dial the number of a working telephone. The telephone must ring to confirm the registration.

3. Receive a call.

    a. If the portable has the same extension number as a desk telephone, make sure the desk telephone is idle and Call Forward is not active.

    b. On another working telephone, dial the telephone number of the registered portable. The portable must ring to confirm the registration.

    If you do not hear dial tone, or if the portable does not ring, refer to "Troubleshooting" in *Meridian Companion Installation and Maintenance Guide*. If you continue to experience difficulty registering the portable, contact your distributor.

Deregistering the C3060

You can deregister the C3060 in several ways:

- from the portable

- from the Administration Terminal (refer to *Meridian Companion Administration Terminal Operations Guide*)

- from Companion Manager (refer to *Companion Manager Installation and Operations Guide*)

Deregistering the C3060 from the portable clears registration information stored in the portable and the system. For example, you may want to deregister the portable before you assign it to another WTN on the same system.

Deregistering the C3060 from the Administration Terminal or from Companion Manager does not clear registration data from the portable. (You could use this method if the portable were lost or stolen or if you wanted to assign it to another system.)

If a portable is registered on other systems, it will still be available on those systems. You deregister one system at a time.

Note: If you are out of range of the system, this procedure clears registration data only from the portable.

1. Press Ⓜ ✳ ✳ ✳. The display shows **ADMINISTRATION** and three softkeys, S̲Y̲S̲, P̲I̲N̲F̲O̲, D̲A̲T̲A̲.

2. Press S̲Y̲S̲. The display shows **WIRELESS SYSTEMS**.

3. Press E̲R̲A̲S̲E̲ . The display shows Erase item? .

4. Press O̲K̲ . The display shows Deregistering... and then Item erased.

Measuring RSSI for a C3060

The Receive Signal Strength Indicator (RSSI) is a measurement of the signal strength the Base Station receives from the portable. The Base Station controls the power transmitting mode of the portable. When the Base Station receives a weak signal, it instructs the portable to transmit in high-power. When the Base Station receives a strong signal, it instructs the portable to transmit in low-power. The strongest RSSI value the display shows is -35 dBm. The weakest RSSI value the display shows is approximately -94 to -100 dBm.

Measuring undirected RSSI

You can measure the signal strength between a portable and a system-selected Base Station using undirected RSSI.

1. Press ⓜ. The display shows MENU.

2. Press ⌃ or ⌄ until the display shows Feature request.

3. Press SELCT . The display shows A- .

4. Press ⊛ ⑧ᵀᵁⱽ ⑨ᵂˣʸᶻ ⑧ᵀᵁⱽ. The display shows the cell number, the radio ID of the Base Station to which the portable is linked, the power mode (high or low), followed by the signal strength and the channel. For example, 8 15112 H 67 29.

You can also press   to view the information in "standard" display mode. This mode displays the radio ID of the Base Station to which the portable is linked, followed by the signal strength and power mode. For example, `15112 - 67 H` . You can revert back to the initial display mode by pressing   .

Hand-off occurs normally between the cells.

Note: In this example, the cell is `8`, the card is `15`, the port is `11`, the radio is `2`, and the channel is `29`. The signal strength measured by the Base Station is `-67` dBm, and the `H` indicates the portable is transmitting in high-power mode (an `L` indicates low-power mode).

5. To end the connection, press ☏.

Measuring directed RSSI

You may want to measure the RSSI between a portable and a specific Base Station radio. For example, you may suspect that one of the two radios in a Base Station is not working properly. You can also use directed RSSI to prevent hand-off while you find a cell edge. To measure the RSSI of a specific radio, you must be in range of two Base Stations—the one you want to measure and another Base Station.

Note: You cannot measure the directed RSSI of both radios in the Base Station at the same time.

Before you measure directed RSSI, use *Meridian Companion Programming and Provisioning Record* to find and note the following:

- The five-digit ID of the Base Station radio you want to measure, by mapping the Base Station location to the TCM port. The first four digits indicate the TCM port to which the Base Station is connected. The last digit indicates the number of the radio on the Base Station. For example, the number 03142 on the Base Station is connected to TCM port 0314, and 2 is the radio number. The five-digit number might be printed on a label attached to the Base Station mounting bracket.

- The radio IDs of all other Base Stations in the same location.

1. Follow steps 1 to 5 of "Measuring undirected RSSI'' on page 94.

   If the display shows the ID of a Base Station neighboring the one you want to measure, proceed to step 2.

   If the display shows the ID of the Base Station you want to measure, move out of the cell boundary range so that hand-off occurs and then continue with step 2.

2. Press ⓜ. The display shows MENU.

3. Press ⌃ or ⌄ until the display shows Feature request.

4. Press SELECT . The display shows A- .

5. Press ⁎ 8 TUV 9 WXYZ 9 WXYZ.

6. Enter the five-digit ID code for the Base Station radio you want to measure. The display shows the cell number, the radio ID of the Base Station to which the portable is linked, the power mode (high or low), followed by the signal strength and the channel. For example,
   8 15112 H 67 29.

You can also press   to view the information in "standard" display mode. This mode displays the radio ID of the Base Station to which the portable is linked, followed by the signal strength and power mode. For example, `15112 - 67 H` . You can revert back to the initial display mode by pressing .

Hand-off does not occur as you move between the cell boundaries. The link drops when you move out of range.

Note: In this example, the cell is `8`, the card is `15`, the port is `11`, the radio is `2`, and the channel is `29`. The signal strength measured by the Base Station is `-67` dBm, and the `H` indicates the portable is transmitting in high-power mode (an `L` indicates low-power mode).

7. To end the connection, press Ⓜ.

Registering the C3050

The following section describes the procedures involved in registering Companion C3050 portable telephones. To register each portable with the Norstar system, you must do two things:

• Register the portables by entering the Registration password on each one.

• Verify that the portable functions correctly.

C3050 Icons

Some C3050 portable telephone icons for Canada and the United States are different but have the same functions. The following table identifies these icons:

C3050 Canada	Icon function	C3050 US
	Mute button	**Mute**
	Hang up button	`End`

C3050 Canada	Icon function	C3050 US
	Answer button	☐ *Line*
	Feature button	☐ *Feature*
	Telephone directory button	☐ *Dir*

To register the C3050

1. Turn on registration for your system.

2. Open the portable flap. The portable displays the current system name or No system selected for two seconds.

3. Press ⟨System⟩. The portable displays WIRELESS SYSTEMS. Your portable can be registered to a maximum of nine different systems.

4. Press the ADD key to establish a radio link. The portable displays Adding SYSTEM:# for two seconds, then it displays Pswd:.
   If a radio link is not established, the portable displays No connection. Close the flap, and repeat the procedure from step 1.

5. Enter the Registration password. The default is **7**ᴾፐᴿˢ **2**ᴬᴮᶜ **3**ᴰᴱᶠ **4**ᴳᴴᴵ **6**ᴹᴺᴼ (RADIO). The portable displays DN:.
   If the registration password is not correct, the portable displays InvldPswd. Close the flap and repeat the procedure from step 1.

6. Enter the DN (between 637 and 666). The portable displays Enter name.
   If the DN is incorrect, the portable displays Invld DN. If the registration fails, the portable displays Reg failed.
   If you try to register the C3050 to the same system twice, the portable displays the registered name, for example Registered as NORTEL 1.

7. Enter the system name (up to 16 characters), for example
   NORTEL 1. (If you are registering to only one system, use
   the portable telephone user's name.)

   Press the key that has the letter. For example, to enter A,
   press 2^ABC, to enter B, press 2^ABC 2^ABC.

   Press SPACE to add a blank space to the name.

   Press BKSP to remove a mistake.

   Press ◁ or ▷ to move the cursor backward or forward.

8. Press SAVE. The portable displays the registered name, for
   example NORTEL 1 registered.

9. Turn off registration for your system.

To confirm that the C3050 is registered

1. Close, then open the portable flap.

   If the portable displays the system name that you just
   registered, proceed to step 5.

   If the portable displays a different system name, or No
   system selected, proceed to step 2.

2. Press [System]. The portable displays WIRELESS SYSTEMS.

3. Press the scroll keys (▽ or △) until the system name
   is displayed.

4. Press SELCT (or OK if the correct system is already
   selected).

5. Press [Line] or . You hear a dial tone, and the portable
   displays ⌂.

   If you do not hear a dial tone, check that you have selected
   the correct system and try to register the portable again.

6. Close the portable's flap, and set the Ringer Control Switch to ♪.

   If the portable is twinned with a desk telephone, make sure the desk telephone is idle and Call Forward is not active.

7. On another working telephone, dial the telephone number of the registered portable. If the portable rings, it is functioning properly.

If you do not hear a dial tone, or if the portable does not ring, refer to the Troubleshooting section in this guide. If you still cannot register the portable, contact your system supplier.

Deregistering the C3050

You can deregister the C3050 in two ways:

• from the portable

• from the administration set

You can deregister the portable to clear information stored in the portable and the system. To do this, you must be within the coverage area. For example, you may want to deregister the portable before you assign it to another DN.

You can also deregister a portable using the Norstar administration set. You could use this method if the portable was lost or stolen, or if you wanted to assign it to another system. This procedure does not clear registration data from the portable.

If the portable is registered on other systems, it is still available on those systems. You deregister from one system at a time.

To deregister the C3050

1. Open the portable's flap.

2. Press `System`. The portable displays WIRELESS SYSTEMS and ADD.
   Note: *Do not* select ADD.

3. Press the scroll keys ($\bigtriangledown$ or $\bigtriangleup$) to display the system name that you want to deregister.

4. Press ERASE. The portable displays Erase item?.

5. Press OK. The portable displays Deregistering... and then Item erased.

Measuring RSSI for a C3050

The Receive Signal Strength Indicator (RSSI) is a measurement of the signal strength the Base Station receives from the portable. The Base Station controls the power transmitting mode of the portable. When the Base Station receives a weak signal, it instructs the portable to transmit in high-power. When the Base Station receives a strong signal, it instructs the portable to transmit in low-power. The strongest RSSI value the portable displays is −45 dBm (in the US) and −44 dBm (in Canada). The weakest RSSI value the portable displays is approximately −94 to −100 dBm.

To measure undirected RSSI

You can measure the signal strength between a portable and a system-selected Base Station radio using undirected RSSI.

1. Open the portable flap.

2. Press ⌐Line¬ or   .

3. Press ✶ 8ᵀᵁⱽ 9ᵂˣʸᶻ 8ᵀᵁⱽ . The portable displays the radio ID of the Base Station that the portable is linked to, followed by the signal strength and the power mode, for example 03142 − 54 H. Hand-off occurs normally between the cell boundaries.

   In this example, the module is 03, the port is 14, and the radio is 2. The signal strength measured by the Base Station is −54 dBm, and the H indicates that the portable is transmitting in high-power mode (an L indicates low-power mode).

4. To end the connection, press ⌐End¬ or   or close the flap.

Measuring directed RSSI

You may want to measure the RSSI between a portable and a specific Base Station radio. For example, you may suspect that one of the two radios in a Base Station is not working properly.

You can also use directed RSSI to prevent hand-off while you find a cell edge. To measure the RSSI of a specific radio, you must be in range of two Base Stations—the one you want to measure and another Base Station.

You cannot measure the directed RSSI of both radios in the Base Station at the same time.

Before you begin to measure directed RSSI

Use the *Companion Provisioning Record* to find the following:

• the five-digit ID of the Base Station radio you want to measure, by mapping the Base Station location to the time compression multiplex (TCM) port. The first four digits indicate the TCM port to which the Base Station is connected. The last digit indicates the number of the radio on the Base Station. For example, the number 03142 on the Base Station is connected to TCM port 0314, and 2 is the radio number. The five-digit number may be printed on a label affixed to the lower right corner of the Base Station mounting bracket.

• the radio IDs of all other Base Stations in the same location.

To measure directed RSSI using your portable

1. Repeat steps 1 to 3 of "To measure undirected RSSI'' on page 102.

2. When the portable displays the Base Station ID you want to measure, move out of the cell boundary range so that hand-off occurs, and press ⌊*End*⌋ or .

3. Press ⌊*Line*⌋ or .

4. Press ✳ 8ᵀᵁⱽ 9ᵂˣʸᶻ 9ᵂˣʸᶻ.

5. Enter the five-digit ID code for the Base Station radio you want to measure. The portable displays this ID followed by the signal strength and the power mode, for example `03142 - 54` H. Hand-off does not occur as you move between the cell boundaries. The link drops when you move out of range.

    In this example, the module is `03`, the port is `14`, and the radio is `2`. The signal strength measured by the Base Station is `-54` dBm, and the `H` indicates the portable is transmitting in high-power mode (an `L` indicates low-power mode).

6. To end the connection, press `End`,   or close the flap.

Registering the C3020 (Canada only)

The following section describes the procedures involved in registering Companion C3020 portable telephones. To register each portable with the Norstar system, you must do two things:
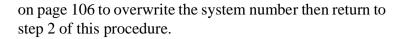
*   Register the portables by entering the Registration password on each one.

*   Verify that the portable functions properly.

To register the C3020

1. On the Administration set, turn on registration in a general programming session.

2. On the portable, press `Shift`, then press `Memory`.

2. Press `Office`.

3. Check the portable's display.

    If the portable has space for another system, the display shows `Office n:Free`.

    If the display does not show `Office n:Free.`, follow the procedures in "Deregistering the C3020 (Canada only)''

on page 106 to overwrite the system number then return to step 2 of this procedure.

4. Press $\left(\widehat{\mathit{Shift}} \right)$, then press $\left(\mathit{Memory} \right)$. The display shows Registering....

5. Next, enter the Registration password when the display shows Pswd:. The default is $\left(7^{PRS} \right)$ $\left(2^{ABC} \right)$ $\left(3^{DEF} \right)$ $\left(4^{GHI} \right)$ $\left(6^{MNO} \right)$ (**RADIO**).

   If the display does not clear after entering the password, then you may be using the wrong password.

6. Wait for the display to clear. When it shows DN:, enter the internal number (637-666) you want to assign to the portable. When the display clears, it shows Reg'n complete.

7. On the administration set, turn off registration in general programming, Companion, subheading Registration.

To confirm that the C3020 is registered

1. To check that the portable has a dial tone, press $\left(\mathit{Line} \right)$.

   If you hear a dial tone, go to step 2.

   If you do not hear a dial tone, check that you have selected the correct system number and press $\left(\mathit{Line} \right)$ again. If you no not hear dial tone try to register the portable again.

2. Make sure that the flap is closed and the Ringer Control Switch is in the bottom position. Make sure the portable telephone is idle and call forward is not active.

3. On a working telephone, dial the telephone number of the registered portable.

   If the portable rings, it is functioning properly.

If the portable does not ring, try to register the portable again.

If you do not hear a dial tone, or if the portable does not ring, refer to the Troubleshooting section in this guide.

Deregistering the C3020 (Canada only)

You can deregister the C3020 in two steps:

- from the portable

- from the administration set (For more information about using the Norstar administration set, see the *Modular ICS System Coordinator Guide*.)

For example, you may want to deregister the portable before you assign it another number on the same system.

You can also deregister a portable using the administration set. You could use this method if the portable was lost or stolen or if you wanted to assign it to another system. This procedure does not clear registration data from the portable.

If the portable is registered on other systems, it is still available on those systems. You deregister one system at a time.

To deregister the C3020

1. Press $\left(\widehat{shift}\right)$, then press $\left(Memory\right)$.

2. Press $\left(Office\right)$. The display shows Office n:.

3. Press either $\left(\widehat{shift}\right)$ then $\left(\#\right)$, or $\left(\widehat{shift}\right)$ then $\left(\times\right)$ until you display the system you want to deregister.

4. Press $\left(\widehat{shift}\right)$, then press $\left(0\right)$. The display shows Deregister?.

5. Press $\left(\widehat{shift}\right)$, then press $\left(0\right)$ again. The display shows Deregistering... and then Deregistered.

6. To continue using the portable, press (Release).

Measuring RSSI for a C3020 (Canada only)

The Receive Signal Strength Indicator (RSSI) is a measurement of the signal strength the Base Station receives from the portable. The Base Station controls the power transmitting mode of the portable. When the Base Station receives a weak signal, it instructs the portable to transmit in high-power. When the Base Station receives a strong signal, it instructs the portable to transmit in low-power. The strongest RSSI value the portable displays is -44 dBm. The weakest RSSI value the portable displays is approximately -85 to -95 dBm.

> **Receive Signal Strength Indicator overrides normal display.**
>
> You cannot receive calls while measuring Receive Signal Strength Indicator.

Measuring undirected RSSI

You may want to measure the Receive Signal Strength Indicator between a portable and a Base Station radio.

1. Press (Line). Wait for dial tone.

2. Press (✱). Enter the feature code: (8ᵀᵁⱽ) (9ᵂˣʸ) (8ᵀᵁⱽ). The display shows the radio ID of the Base Station to which the portable is linked, followed by the signal strength, for example 03121 - 67. In this example, the module is "03," the port is "12," and the radio is "1." The signal strength is "-67dBm."

3. Read your measurement. Hand-off occurs normally.

4. To end the connection, press (Release) or close the flap.

Measuring directed RSSI

You may want to measure the Receive Signal Strength Indicator between a portable and a specific Base Station radio. For example, you may suspect that a radio in a Base Station is not working properly. You can also use directed Receive Signal Strength Indicator to prevent hand-off while you find a cell edge. To measure the Receive Signal Strength Indicator of a desired radio, you must be in range of two Base Stations— the one you want to measure, and another Base Station.

Receive Signal Strength Indicator applies to one radio in a Base Station.

You cannot measure the directed Receive Signal Strength Indicator of the other radio in the Base Station to which you are connected.

Before you begin measuring directed RSSI

Use the *Companion Provisioning Record* to find and note the following:

- the five-digit radio ID of the Base Station you want to measure, by mapping the Base Station location to the TCM port. The first four digits indicate the TCM port to which the Base Station is connected. The last digit indicates the number of the radio on the Base Station. For example, the number "03122" identifies radio "2" on the Base Station connected to TCM port "0312".

- the radio IDs of all other Base Stations in the same location.

Measuring directed RSSI using your portable

1. Perform an undirected Receive Signal Strength Indicator by following steps 1 to 3 in "To measure undirected RSSI'' on page 102. To direct the Receive Signal Strength Indicator to the other radio of the Base Station, move out of range until hand-off occurs before moving on to step 2.

2. Press $(Line)$. Wait for dial tone.

3. Press $(*)$ (8^{TUV}) (9^{WXY}) (9^{WXY}).

4. Enter the five-digit ID code for the Base Station radio you want to measure. The display shows this ID followed by the signal strength, for example 03121 − 67. If you have not established a connection with the desired Base Station radio, you hear a tone when you hold the portable to your ear.

5. Read your measurement. The system drops the link when you move out of range of your Base Station (no hand-off).

6. To end the connection, press $(Release)$, or close the flap.

After registering the portables

When you have completed programming the system, use the following checklist to ensure you completed the required tasks.

☐ Register the portables.

☐ Verify Portable Credits.

☐ Ensure that you registered all the required portables.

☐ Verify that all portables are available for use.

☐ Test each portable to verify it is operating properly.

☐ Disable Master Registration when you have finished registering the portables.

For the steps involved in operating a Norstar Companion portable, see the *Companion Portable Telephone User Guide* that is supplied with the portable.

When you distribute the portables, tell the users that the portables are registered and give them the corresponding extension numbers.

Tip - *You can register a portable to more than one system. You cannot register a portable to more than one extension number per system. You cannot register more than one portable to one extension number.*

If a portable telephone is used in more than one Norstar or Companion system, its owner must know which registration slot number was used to register the portable telephone with each system. (It is preferable that each user register the system they use most in slot 1.)

If a portable telephone is lost or broken, you can deregister it from the system before replacing it with another portable telephone.